SOUTH FLORIDA WATER MANAGEMENT DISTRICT



Ecological Conditions Update

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Cold Snap Has Effects System-Wide

Impacts to Wildlife

- 60 of Florida's 67 counties declared natural disaster areas due to cold
- Unprecedented number of manatee deaths (77) due to cold between Jan. 2 – 23, according to FWC
- FWC has rescued 3,000 plus sea turtles stunned by the record cold.

ENP reported some Burmese python deaths.



Dead crocodiles (50) in ENP.



Cold Snap Kills Everglades Fish

- Both Everglades marshes and estuaries affected by cold
- As far south as Florida Bay water temperature fell to 40°F, killing thousands of fish
- Sport fish impacted, particularly snook, tarpon and bonefish
- In marshes, widespread exotic fish deaths in shallows; canals offered thermal protection







Kissimmee Basin

- The Kissimmee Basin experienced impacts to vegetation from below-freezing temperatures (photos)
- River channel dissolved oxygen levels have remained high



Lake Okeechobee Lake Stage and Water Quality

- Water Clarity is satisfactory and no obvious blooms
- Both Total Phosphorus and Total Suspended Solids increased
- Moderate changes in stage experienced by Lake Okeechobee during past 18 months are beneficial for the littoral environment
- A gentle recession in stage through the spring would enhance wading bird forage and nesting potential



Lake Okeechobee Ecological Conditions

 Large flocks of wading birds are foraging in the Indian Prairie and Moore Haven marshes

 6 Snail Kites seen actively foraging in the OkeeTantie region



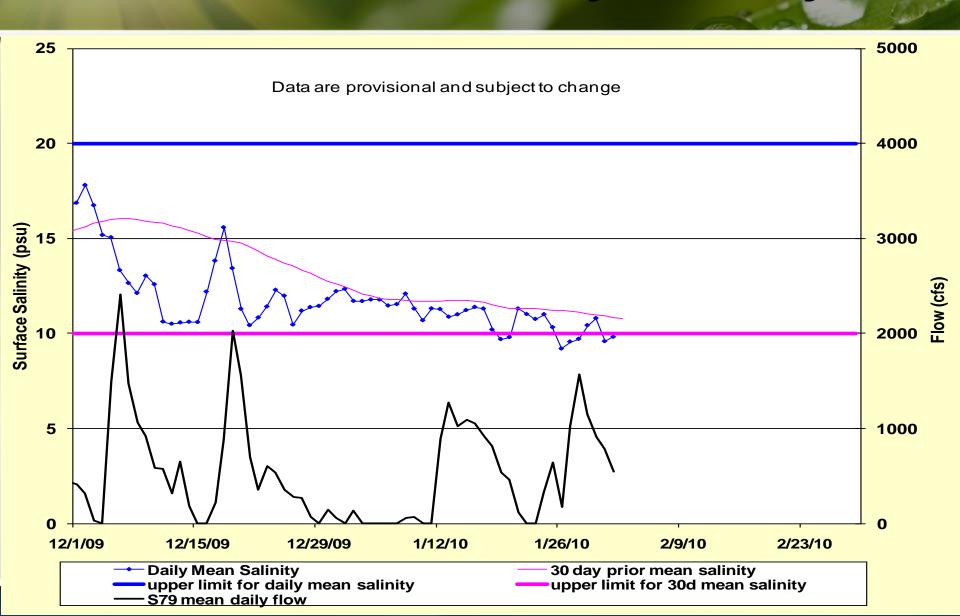
Caloosahatchee Salinity: Fort Myers

Overall salinity levels in the Upper Caloosahatchee Estuary continue to decline toward desired conditions

Salinity conditions in the Lower Estuary and San Carlos Bay continue to be good



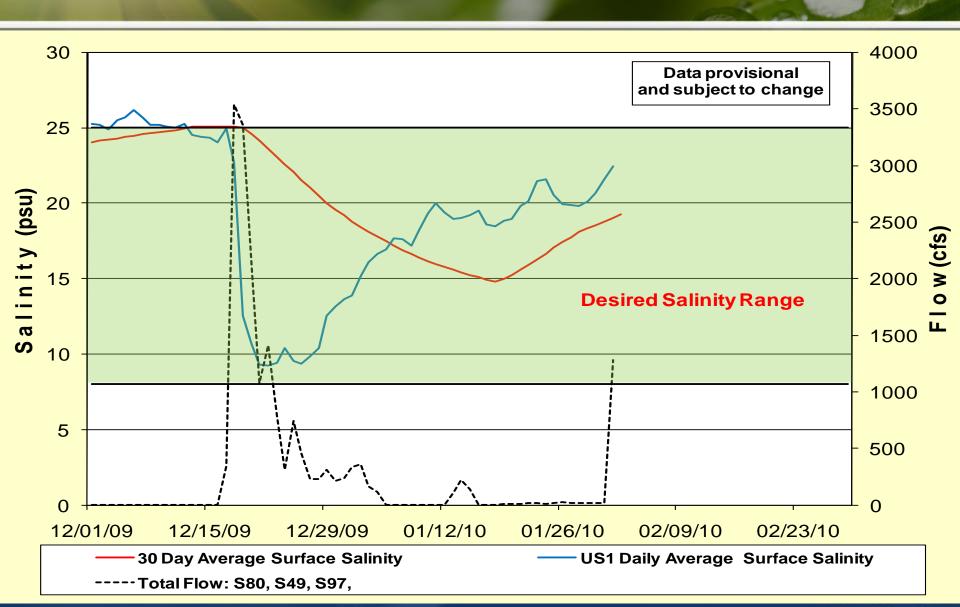
Caloosahatchee Salinity: Fort Myers



St. Lucie Salinity: US 1 Bridge



St. Lucie Salinity: US 1 Bridge



Indian River Lagoon Seagrass

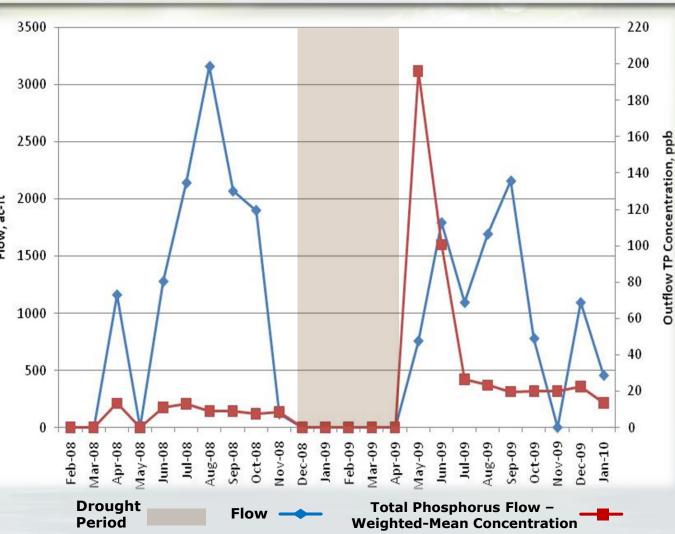


Benthic algal mat present as insulation for small seagrass species (*Halophila spp.*)

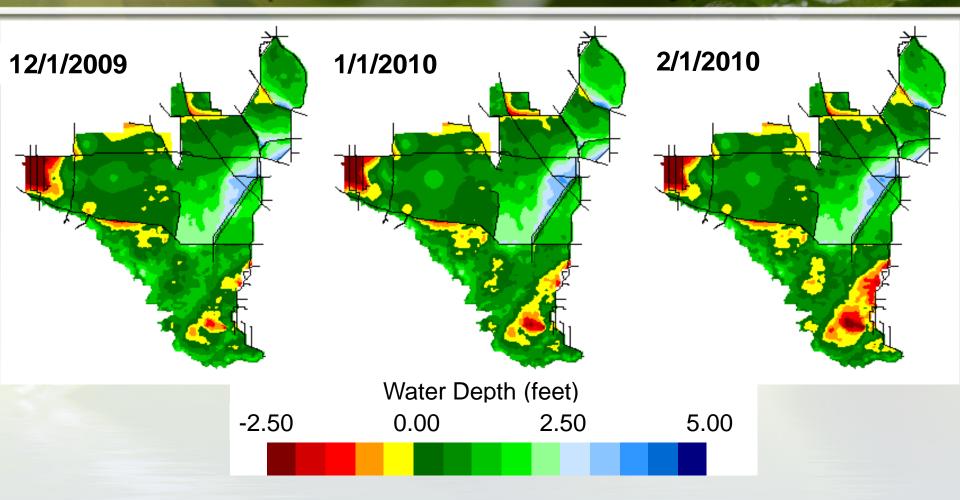


STA-2 Cell 1 Performance Trend

- Outflow phosphorus concentrations spiked in May 2009 upon re-flooding after the 2009 drought period
- Total phosphorus concentrations have been declining slowly; 7-day flow-weighted mean as of January 31, 2010 = 14 ppb

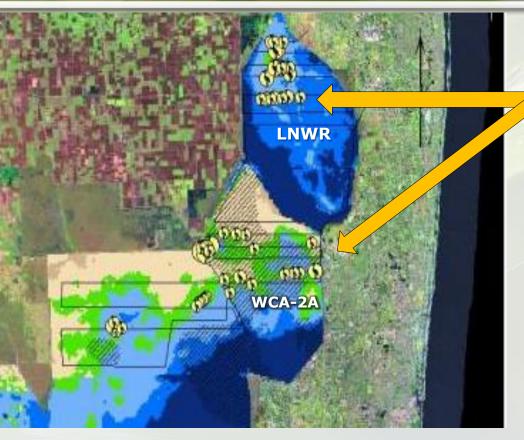


Everglades Water Depth Changes (December – February)



South Florida Water Depth Assessment Tool (SFWDAT)

Wading Bird Foraging Areas



Areas where wading birds feed in relation to water depth and stage recession rates

- Wading birds are currently feeding in WCA-2A and the Lox National Wildlife Refuge
- Green areas have water depths that are optimal for wading bird feeding (~0.25 – ~0.5 ft)
- Hatched areas represent recession rates that are optimal for wading bird feeding (0.04 – 0.15 ft/wk)
- Flocks tend to be found foraging in areas where the green and hatched areas overlapped

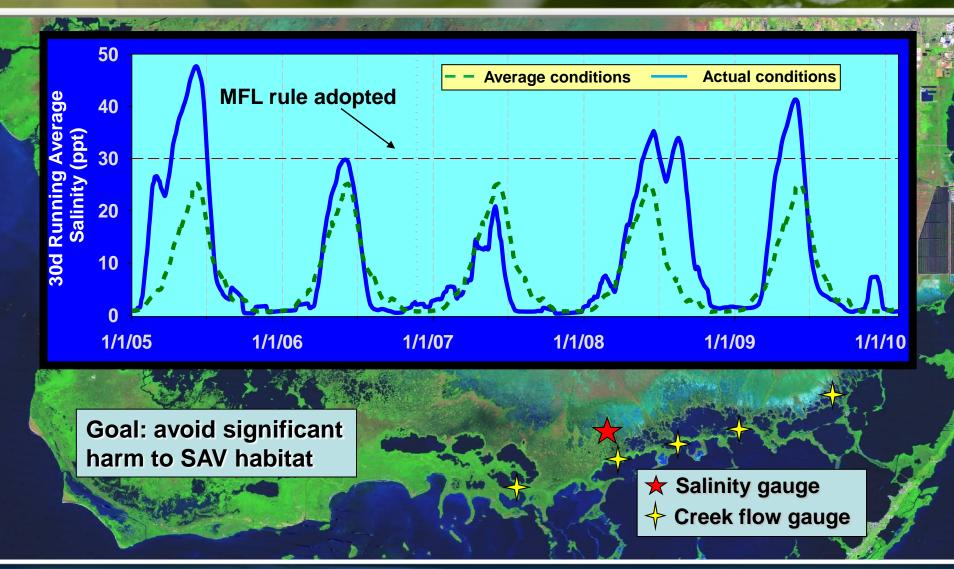
Biscayne Bay Salinity



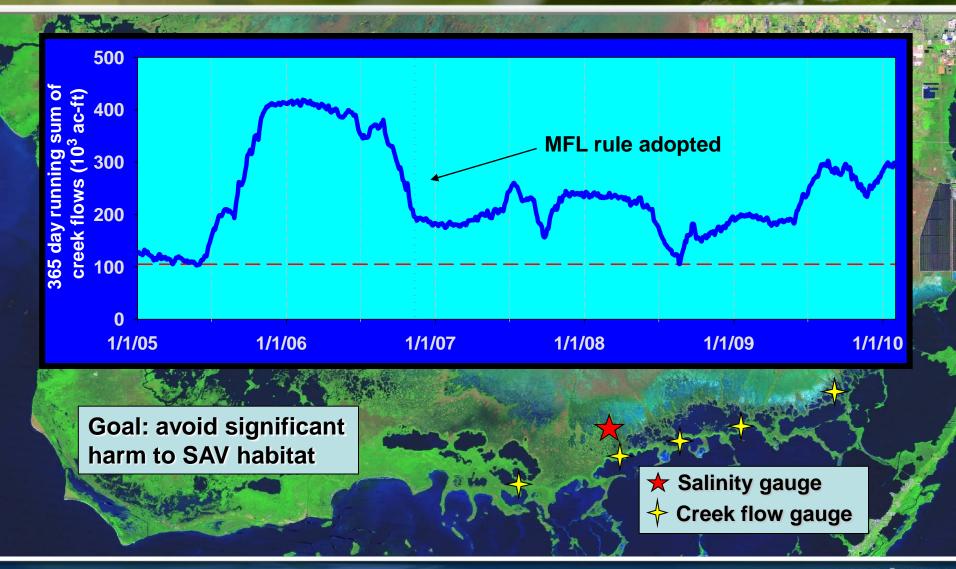
In Biscayne Bay, the salinity is within the preferred range for seagrasses

No hypersalinity was reported in the near shore area last month

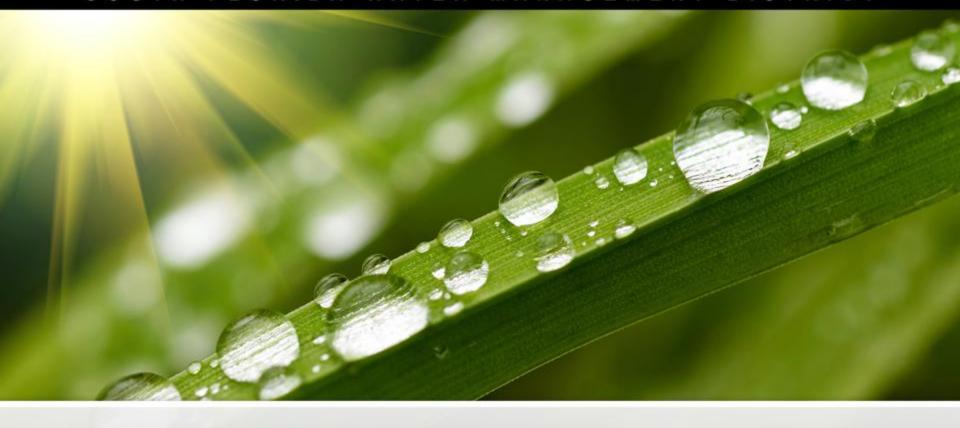
Florida Bay Salinity



Florida Bay Flow



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Thank You!

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